

## State releases first water quality data, updated health information for GenX in Cape Fear River


***Treated drinking water concentrations trending down; latest levels below updated health risk threshold***

Raleigh NC

Jul 14, 2017

State officials today released their first results of water quality samples and an updated preliminary health assessment for concentrations of the unregulated compound GenX in finished, or treated, drinking water.

The revised health goal for exposure to GenX in drinking water is 140 nanograms per liter (also referred to as parts per trillion).

Samples were analyzed at the U.S. Environmental Protection Agency lab in Research Triangle Park and at [Test America](#) , a lab in Colorado under contract to Chemours.


Data from samples collected June 19 and July 6 show that the most recent results of finished, or treated, water in all but one facility were below the N.C. Department of Health and Human Services' health goal of 140 parts per trillion. The data also reveal that concentrations of GenX are trending downward.

Although no information is available about recreational health risks, people should refrain from swimming near the Chemours facility.

"Our goal is to protect the safety and health of all North Carolinians," said Mandy Cohen, secretary of the N.C. Department of Health and Human Services. "We are working closely with our partners at the Department of Environmental Quality to understand and communicate information in a timely manner, to help those impacted."


N.C. Department of Environmental Quality Secretary Michael Regan said:

Safe drinking water is a top priority for this administration, and DEQ takes seriously its responsibility to protect the health and welfare of the public. We will continue to investigate this issue and make new information available to the public in a timely fashion.”

The findings reflect water quality data from samples collected at 13 sites  in the Fayetteville and Wilmington areas between June 19 -July 6. Results show higher concentrations near the point where Chemours' Fayetteville manufacturing facility was discharging GenX into the Cape Fear River, and much lower concentrations at the public water supply systems near the facility and 70 miles downstream in the Wilmington area.

The N.C. Department of Health and Human Services released an initial preliminary health risk assessment on June 8 for GenX in the Cape Fear River. Based on continuing analysis of health data and consultation with the Environmental Protection Agency, the N.C. Department of Health and Human Services today updated its initial preliminary health assessment for GenX, the unregulated chemical compound recently identified in the lower Cape Fear River.

This updated health goal of 140 parts per trillion is expected to be the most conservative and health protective for non-cancer effects in bottle-fed infants, pregnant women, lactating women, children and adults. This health goal is lower than the health goal in the initial preliminary health assessment. This changes reflect information from new data. Detailed information regarding the initial and revised assessments are posted online at:

<https://ncdenr.s3.amazonaws.com/s3fs-public/GenX/NC%20DHHS%20Risk%20Assessment%20FAQ%20Final%20Clean%20071417%20PM.pdf> .

Lower second week values reflect reduced exposure to GenX when, at the urging of state, local officials and concerned citizens, Chemours on June 21 began diverting wastewater containing the contaminant into storage tanks to be shipped out of state for incineration. DEQ inspected the Chemours site again this week after the company indicated that data it had collected was higher than what it would have expected to see after the June 21 wastewater diversion had started. DEQ inspectors confirmed this week that Chemours stopped the additional discharges of GenX into the river and is collecting them for removal and incineration.

The following data table reflects partial results of concentrations of GenX after the water had been treated by public water systems.

#### Gen X Concentration in Finished Water

Location	06/22/2017 results ppt	06/29/2017 res lts ppt	07/06/2017 results ppt
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	Test America, CO	EPA RTP, NC	Test America, CO	EPA RTP, NC	Test America	EPA RTP, NC
International Paper Finished	690	523	140	111	N/A	80
NW Brunswick Water Treatment Plant (WTP) Finished	910	695	51	52	N/A	125
Pender Co. 421 WTP Finished	340	269	160	112	N/A	68
CFPUA Sweeney Finished	1100	726	110	100	N/A	87

#### Gen X Concentration in Finished Water

Location	06/19/2017 results ppt	06/26/2017 results ppt
	Test America, CO	Test America, CO
Bladen Bluffs Finished	790	76

Early results from all 13 test sites can be found on the N.C. Department of Environmental Quality's GenX website: <https://ncdenr.maps.arcgis.com/apps/webappviewer/index.html?id=0ce5c1795dee402686675956865d5790> . A document showing the results in a spreadsheet is at: [https://www.ncwater.org/basins/Cape\\_Fear/GenXDataspreadsheet.pdf](https://www.ncwater.org/basins/Cape_Fear/GenXDataspreadsheet.pdf) .

Additional water sample testing and analysis are underway with results to be shared once analysis is completed.

The state's preliminary health goal was developed in consultation with EPA and the Centers for Disease Control and Prevention. Ongoing discussions will apply guidance from leading federal researchers of emerging contaminants to help state officials provide the public with the best information available on potential health risks



posed by GenX.

Officials have been collecting water samples at multiple locations in the Fayetteville and Wilmington areas each week since June 19 and will continue sampling until at least late July. DEQ officials have extended the state's sampling regimen from three-to-six weeks to provide a more comprehensive understanding of GenX concentrations in the lower Cape Fear River.

For further information, please contact Chris Mackey, with the N.C. Department of Health and Human Services, at 919-855-4840 or 919-441-3577, or Jamie Kritzer, with the N.C. Department of Environmental Quality at 919-707-8602 or 919-218-5935.

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HFPO-DA (GenX) Analysis June - July 2017

Fayetteville Location	06/19/2017 results ppt		06/26/2017 results ppt		07/03/2017 results ppt		07/12/2017 results ppt		7/17/2017		7/24/2017		QA Comments <sup>1,2,3</sup>
	Test America	EPA RTP, NC	Test America	EPA RTP, NC	Test America	EPA RTP, NC	Test America	EPA RTP, NC	Test America	EPA RTP, NC	Test America	EPA RTP, NC	
Hoffer WTP Raw	N/A	N/A	N/A	N/A		4							EPA 7/03: Below Limit of Quantitation (LOQ) of 10 ppt
Chemours outfall 002	39000	21760	19000	15250		21530							TestAmerica 6/19: 50X dilution, DUPs 41000 and 35000 [13% RPD], SURR RECs 45 and 48%, MS DNR, IS Low for DUP and MS EPA 6/19: 20X dilution TestAmerica 6/26: 50X dilution, DUPs 18000 and 21000 [15.4% RPD], MS DNR EPA 6/26: 20X dilution EPA 7/03: 20X dilution
Bladen Bluffs Raw	570	501	36	31		168							EPA 6/19: 5X dilution TestAmerica 6/26: SURR REC 33%, IS Low
Bladen Bluffs Raw Duplicate	590		33										
Bladen Bluffs Finished	790		76										TestAmerica 6/19: 2X dilution, SURR REC 14%, IS Low
Smithfield Foods Well Field	<10		<10										TestAmerica 6/19: SURR REC 9%, IS Low
Chemours Field Blank	<10		<10										

Wilmington Location	06/22/2017 results ppt		06/29/2017 results ppt		07/06/2017 results ppt		7/13/2017 results ppt		7/20/2017		7/27/2017		QA Comments <sup>1,2,3</sup>
	Test America	EPA RTP, NC	Test America	EPA RTP, NC	Test America	EPA RTP, NC	Test America	EPA RTP, NC	Test America	EPA RTP, NC	Test America	EPA RTP, NC	
International Paper Raw	810	703	73	41		158							TestAmerica 6/22: DUPs 810 and 810 [0%RPD], MS 101% EPA 6/22: 5X dilution TestAmerica 6/29: SURR REC 20%, IS Low
International Paper Raw DUP						162							
International Paper Finished	690	523	140	111		80							TestAmerica 6/22: SURR REC 45%, IS Low EPA 6/22: 5X dilution TestAmerica 6/29: SURR REC 19%, IS Low
NW Brunswick WTP Finished	910	695	51	52		125							EPA 6/22: 5X dilution TestAmerica 6/29: SURR REC 24%, IS Low
Pender Co. 421 WTP Finished	340	269	160	112		68							TestAmerica 6/22: SURR REC 8%, IS Low EPA 6/22: 5X dilution TestAmerica 6/29: SURR REC 43%, IS Low
LCFWSA Raw	830	629	67	72		119							TestAmerica 6/22: IS Low EPA 6/22: 5X dilution TestAmerica 6/29: SURR REC 24%, IS Low
CFPUA Sweeney Finished	1100	726	110	100		87							EPA 6/22: 5X dilution TestAmerica 6/29: SURR REC 40%, IS Low
CFPUA - ASR Well	820	588	400	336		148							EPA 6/22: 5X dilution TestAmerica 6/29: SURR REC 25%, MS 118% REC, IS Low EPA 6/29: 2X dilution
Wrightsville Beach Well No. 11	26	27	24	28		24							TestAmerica 6/22: DUPs 26 and 25 TestAmerica 6/29: SURR REC 34%, IS Low
International Paper Raw Site Blank	<10		N/A										
Wrightsville Beach Well No. 11 Blank	<10		N/A										
EPA Trip Spike High	N/A		270										TestAmerica 6/29: HNO3 preserved; adj w/10% NH <sub>4</sub> OH, SURR REC 24%, IS Low, Spike nominal value 200 ppt, 135% REC
EPA Trip Spike Low	N/A		95										TestAmerica 6/29: HNO3 preserved; adj w/10% NH <sub>4</sub> OH, SURR REC 23%, IS Low, Spike nominal value 70 ppt, 136% REC
EPA Trip Blank	N/A		<10										TestAmerica 6/29: HNO3 preserved; adj w/10% NH <sub>4</sub> OH, SURR REC 9%, IS Low
Trip Blank 9	N/A		<10										

QA samples (Blanks, Duplicate & Spikes)

<sup>1</sup> The TestAmerica laboratory performs an isotope dilution methodology which employs internal standards which are are stable isotopically labeled analogs of the target analytes added to the sample prior to extraction. Physical and chemical properties of each labeled compound are virtually the same as its unlabeled native analog, thus any losses of the target compound that may occur during sample preparation or determinative steps will be mirrored by a similar loss of the labeled standard. A recovery correction is then applied to sample results.

<sup>2</sup> Except where noted the associated MB, low-level LCS, mid-level LCS/LCSD and MS recoveries were in control for TestAmerica data. QC data not yet reported for EPA.

<sup>3</sup> The internal standard/surrogate is added to samples prior to the extraction step.